



ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240

Supreme Court Rules In Favor Of Snail Darter

The U.S. Supreme Court, in a 6 to 3 decision, has prohibited the Tennessee Valley Authority from closing its nearly completed Tellico Dam, thereby preserving the Critical Habitat of the Endangered snail darter (*Percina tanasi*).

In the landmark decision handed down June 15, the majority opinion written by Chief Justice Warren E. Burger held that the language of Section 7 of the Endangered Species Act of 1973 "is plain and makes no exception" for such projects as Tellico, that were underway when Congress passed the 1973 law.

"It is clear from the Act's legislative history that Congress intended to halt and reverse the trend towards species extinction—whatever the cost," Burger said. "The pointed omission of the type of qualified language previously included in endangered species legislation reveals a conscious congressional design to give endangered species priority over the 'primary missions' of Federal agencies. Congress, moreover, foresaw that Section 7 would on occasion require agencies to alter ongoing projects in order to fulfill the act's goals."

The decision upheld a U.S. Sixth District Court of Appeals ruling on January 31, 1977, enjoining TVA from closing the \$110 million dam in a suit brought by a group of environmentalists (Hiram G. Hill, Jr. et al). TVA had sought a reversal of this ruling, arguing that Tellico was not bound by Section 7 restrictions by virtue of the fact that it was started six years before the act's passage, and was approximately 75 percent completed when the snail

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African Elephant Listed as Threatened; Special Rules to Allow Some Ivory Imports

The Service has taken final action to list the African elephant (*Loxodonta africana*) as Threatened, and has issued special rules for imports of ivory into the United States (F.R. 5/12/78).

Under the rulemaking, effective June 11, the Service adopted a course for controlling ivory importation that places the burden for ensuring that exports to the United States were legally acquired—and not detrimental to the survival of the species—on the member nations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

The special rules state the importation of African elephants and their parts or products will be permitted only under the following provisions:

- The specimens or materials involved must have originated in the wild from a country that is party to the Convention.
- Any case involving exportation or reexportation must be in compliance

with article IV of the Convention and have remained in customs control in an unaltered condition while in transit to the United States through non-Convention nations.

• Special-purpose permits may be issued authorizing any activity otherwise prohibited with regard to the African elephant upon submission of proof that such wildlife was already in the United States on the effective date of this rulemaking, or was imported in accordance with the above provisions.

These rules are a modification of Option 2 set forth in the Service's proposal last January 16 to list the African elephant as Threatened (see the January 1978 BULLETIN). The original Option 2 would have allowed imports from Convention nations even if the item originated in a non-Convention country, and would not have required issuance of special-purpose permits for interstate commerce.

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Florida Jetport Receives ES Clearance

A biological opinion has been issued by the Service stating that the proposed operation of the Florida Replacement Jetport training facility in Dade County is "not likely" to jeopardize the continued existence of the Florida Everglade kite (*Rostrhamus sociabilis plumbeus*), and suggesting that the Federal Aviation Administration (FAA) carry out certain safeguards to insure continued protection of this Endangered species.

The opinion was rendered May 31 following formal section 7 consultation with FAA on the potential impact of the

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Male Everglade kite at Florida's Loxahatchee NWR

U.S. Fish and Wildlife photo by Luther Goldman

Regional Briefs

Endangered Species Program regional staffs have reported the following summary of recent activities in their areas:

Region 1. The Oregon Rare Plant Task Force has received a contract to prepare status reports on Oregon plants. This is a cooperative project financed by the Bureau of Indian Affairs, the Bureau of Land Management, the Heritage Conservation and Recreation Service, the Environmental Protection Agency, the Fish and Wildlife Service, the Forest Service, the Army Corps of Engineers, and the Soil Conservation Service.

Two populations of the Warner sucker (*Catostomus warnerensis*)—a species thought to be extinct—have been discovered in Oregon's Honey Creek system. One population was found in a stream, and the other in a lake. A proposed Endangered status and Critical Habitat rulemaking is being prepared for the fish.

Thirty red wolf pups (*Canis rufus*) were born (7 litters) in May at the Point Defiance Zoological Park, which is located in Tacoma, Washington.



Virginia Citizens Honored For Saving Round-Leaf Birch

The Fish and Wildlife Service presented its Citizen's Award to Ray Haulsee (holding certificate at left center) and Garland Ross, both of Sugar Grove, Virginia, for protecting recently rediscovered specimens of the Endangered Virginia round-leaf birch on their property. Both men decided to erect fences around the trees at their own expense to keep away vandals and plant collectors and to preclude grazing by cows. The trees were discovered by Douglas W. Ogle (at far left), a professor at Virginia Highlands Community College. Peter Mazzeo (standing next to Ogle), a botanist at the National Arboretum in Washington, D.C., provided historical information that helped lead to Ogle's find in 1975. The presentation was made May 5 by Howard Larsen (far right), the Service's Boston regional director.

Region 2. A survey of nesting bald eagles (*Haliaeetus leucocephalus*) in central Arizona has recorded a total of 10 occupied territories, an increase of one over last year. Five of eight oc-

cupied nests produced a total of 10 hatchlings (two per nest). One of the successful nests was discovered this year.

Region 5. A Service consultation team has been established for the Army Corps of Engineers Dickey-Lincoln Dam project in northern Maine. The team will prepare a report for biological opinion on the project's effect upon the Furbish lousewort (*Pedicularis furbishiae*). Research has begun to determine if the plant can be artificially propagated. If proven feasible, large numbers of plants can be cultivated and reintroduced into the wild.

Region 6. Coordination meetings have been held at Denver, Colorado, and Billings, Montana, to discuss the potential effects of the Northern Border Gas Pipeline. The project's impact on Endangered species appears to be minimal.

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Potter Heads Houston Toad Recovery Team

The Service has appointed a re-
covery team for the Houston toad,
headed by Floyd E. Potter, Jr., of the
Texas Parks and Wildlife Depart-
ment, to develop a plan for the re-
covery of this Endangered species.

The other members are Dr. Lauren
E. Brown of Illinois State University,
Dr. Howard W. Campbell of the Ser-
vice's National Fish and Wildlife
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Darter (continued from page 1)

darter was discovered in a portion of the Little Tennessee River to be flooded by the dam.

No Committee 'Repeal'

In addition, Attorney General Griffin B. Bell had contended in his debut before the Supreme Court April 18 on behalf of TVA that Congress had sanctioned the dam's completion when it appropriated funds for the project in 1975, 1976, and 1977. He cited House and Senate Appropriations Committee reports saying the project should proceed.

But Burger rejected this argument, asserting that "nothing in the TVA appropriations measures passed by Congress stated that the Tellico Project

was to be completed regardless of the act's requirements. To find a repeal under these circumstances . . . would violate the 'cardinal rule . . . that repeals by implication are not favored'."

Dissenting Views

Justice Lewis F. Powell, Jr., in a dissenting opinion, said the court should view the act "reasonably" and shape a remedy that "accords with some modicum of common sense and the public weal." He argued that the meaning of "actions" in Section 7 was far from plain and that "it seems evident that the 'actions' referred to are not all actions that an agency can ever take, but rather actions that the agency is

deciding whether to authorize, fund or carry out."

Powell was joined in the dissent by Justice Harry A. Blackmun. Justice William H. Rehnquist dissented separately.

Zygmunt J. B. Plater of Wayne State University Law School, who argued the case for the environmentalists, said he was delighted by the decision. He said the Supreme Court had made clear "what we've been trying to show all along: this is not a 'little fish vs. big dam' case. It is a question of whether a federal agency must obey federal law, because if TVA had complied with the law's conflict-resolution procedures back in 1973, we would never have had to go to court in the first place."

FWS Speeds Intra-Service Section 7 Consultations

All divisions within the Fish and Wildlife Service are now reviewing their programs and activities in accordance with intra-Service consultation procedures to ensure their compliance with Section 7 of the Endangered Species Act of 1973.

The procedures, established on February 8—a month after the publication of final section 7 regulations (F.R. 1/4/78)—specify criteria to determine when intra-Service consultation is required with Endangered Species Program personnel. (Under Section 7 of the act, all Federal agencies are required to consult the Fish and Wildlife Service when activities they fund, authorize, or carry out may affect listed species or their habitats.)

Requests for consultation are processed by ES Program staff of both the Washington and regional offices along with consultation requests from other Federal agencies. However, according to Service policy, once it is determined that a proposed Service action "may affect" a listed species, formal consultation must be handled at the directorate level.

Service operations primarily affected by Section 7 requirements include refuges, animal damage control, law enforcement, contract issuance, research, Federal aid to states, ecological services, and permit issuance.

Review Criteria

Under the procedures, the Service has established four criteria on which to screen its program activities following inquiries on the need for consultation. They are as follows:

1. *Will not affect:* Consultation is not required, although verbal confirmation may be obtained from the Endangered Species Program manager.

2. *Definite beneficial effect:* Formal consultation is required from the Director of the program if the action/ac-

tivity contributes to the conservation of listed species or their Critical Habitats.

3. *Definite adverse effect:* Action/activity must be abandoned or modified sufficiently to eliminate the adverse effect on listed species or their Critical Habitats. (If this is not possible, consultation is required.)

4. *May effect:* Formal consultation is required with the Director concerning actions/activities that may affect a listed species or its Critical Habitat either adversely or beneficially.

Consultation requests generally are submitted with an evaluation form prepared by the originating region or project manager, although in some cases they may be handled by telephone.

Examples of Requests

Typical of the dozens of requests that have originated under the Service's research program was one from the Virginia Cooperative Fishery Research Unit, which involved a project to survey the distribution of Endangered clam populations in the Powell, Clinch, and Holston Rivers of Virginia's Cumberland Plateau region. The study required samples of clams to be taken by scuba diving or wading riffles, weighing and measuring them, and then returning them to their habitat—actions that carried a "may effect" evaluation.

Consultations have been completed for activities such as studies of bald eagle feeding patterns, Hawaiian forest bird surveys, a search for the eastern cougar that will include photography, and grizzly bear behavior under various kinds of bear-man encounters.

Management of the numerous National Wildlife Refuges (NWR's) that contain listed species is also generating consultation requests. For example, the Anahuac NWR on Texas' Galveston Bay sought consultation on the con-

struction of a canal that may have affected the red wolf and alligator populations in the area.

The Federal Wildlife Permit Office is requesting consultation on virtually all permit requests involving listed species. Recently, the Service issued a "blanket" biological opinion following a request for "aggregate section 7 consultation" on the issuance of permits authorizing interstate commerce in captive, self-sustaining populations (CSSP's). (All of the permits reviewed concerned listed pheasants. Interstate commerce in lemurs, tigers, jaguars, or leopards—also CSSP's—would have to be addressed, therefore, in a separate consultation.)

All new applications for Federal Endangered species grant-in-aid assistance, as well as requests for amendments to ongoing Federal assistance programs, will also involve consultation before approval can be given by the Director.

Even contract proposals affecting listed species must be approved following consultation before final award.

"We're making every effort to ensure that we comply with the full intent and spirit of section 7 in furthering the purposes of the act," says Robert Jacobsen, chief of the Office of Endangered Species' Branch of Management Operations, which oversees Service consultations.

To promote handling of Service requests as promptly as possible, the program has established a self-imposed two-day maximum in rendering opinions on whether activities that may effect Endangered or Threatened species should proceed as scheduled or be modified.

The Service also plans to hire more than 70 section 7 specialists over the next few months to meet its obligations in the consultation process.

State Report

Black-footed Ferret, Peregrine Head New Mexico's Agenda of Endangered Species Projects

New Mexico
Department of
Game & Fish

New Mexico's Endangered Species Program is preparing to join the hunt for the elusive black-footed ferret (*Mustela nigripes*), one of the Nation's rarest Endangered mammals.

The State is contracting with a private firm for the training of two dogs that would be able to work large prairie dog towns to sniff out ferrets. The dogs would be expected to discriminate between the scents of black-footed ferrets and similar animals and to signal the presence of a ferret to the dog handler.

John P. Hubbard, supervisor of the program for the New Mexico Department of Game and Fish, believes the training project will prove extremely worthwhile if successful. "Up to now," he says, "we have had to rely on primitive methods to locate ferrets." (There have been no recent confirmed black-footed ferret sightings in the State. The animal is often confused with the long-tailed weasel, which has a face mask somewhat similar to the ferret's.)

The dogs would be used especially to search prairie dog towns targeted for destruction or poison control. If any ferrets are found in these areas, Hubbard says, it is hoped they can be re-established in other locations.

Federal Aid Projects

New Mexico signed a cooperative agreement with the Fish and Wildlife Service in 1977, becoming eligible to receive Federal grant-in-aid matching funds for endangered species conservation in the State. The ferret dog-training project, expected to cost about \$20,000, may soon receive Service ap-

proval for grant-in-aid assistance.

Currently, New Mexico is involved in a joint project with Colorado to augment the production of peregrine falcon (*Falco peregrinus anatum*) eyries. The New Mexico portion of this project is costing \$13,300, with 75 percent paid by Federal grant. (The States will exchange data on their peregrine studies and work together in implementing the recovery plan for the Rocky Mountain-Southwest population of this species.)

Under authorization of the State's Wildlife Conservation Act, passed in 1974, New Mexico lists 104 species of animals as endangered, including 12 on the Federal list of Endangered and Threatened species. In addition to the ferret and peregrine falcon, the federally listed species include the Mexican wolf (*Canis lupus baileyi*), jaguar (*Felis onca arizonensis*), bald eagle (*Haliaeetus leucocephalus*), whooping crane (*Grus americana*), Mexican duck (*Anas platyrhynchos diazi*), Gila trout (*Salmo gila*), Colorado River squawfish (*Ptychocheilus lucius*), Pecos gambusia (*Gambusia nobilis*), Gila topminnow (*Poeciliopsis occidentalis occidentalis*), and the recently listed Socorro isopod (*Exosphaeroma thermophilum*).

State ES Program

For fiscal year 1978, the New Mexico Endangered Species Program is budgeted at \$125,000, about 40 percent of which comes out of the State's general fund revenues. It is the only wildlife program of the State Game and Fish Department that is supported out of the general fund; others receive the bulk of their funding from the sale of

hunting and fishing licenses and from other Federal grant-in-aid programs.

The State Endangered Species Program employs four full-time biologists, including Hubbard, and is geared to perform basic research, surveys, and management activities on listed as well as potentially endangered species. It also funds contractual or intern studies for work on both State and federally listed species. Under the State's present law, endangered species protection is limited to mammals, birds, reptiles, amphibians, fish, mollusks, and crustaceans. Plants are not included.

'Geopolitical' Concept

New Mexico is one of the larger states, encompassing 121,666 square miles of terrain and habitats ranging from desert scrub to alpine tundra. The land supports a diverse biota of some 140 mammal species, 435 birds, 80 reptiles, 22 amphibians, 59 fish, and countless invertebrates.

"We see our major objective as one of preserving the biological diversity of New Mexico, with our program designed to aid those species that are most likely to be lost in the near future," Hubbard says.

"Our enabling legislation charges us with treating as endangered those species whose prospects of survival or recruitment in New Mexico are either now in jeopardy or are likely to be so in the near future. From this definition one can see that under our law, 'endangered' is gauged on a geopolitical rather than an overall concept of the range of species. We find this a very acceptable concept, because we believe that each state should concern itself primarily with conserving the wildlife within its domain."

Under this concept, he adds, it is also possible for New Mexico to play a very strong role in protecting its resident species even without the additional protection of Federal listing action.

Falcon Projects

The program's philosophy may be viewed in its approach to management of the peregrine falcon. Hubbard says the major threat to the bird in New Mexico appears to be chlorinated hydrocarbons, which cause eggshell thinning, but that the source of contamination has not been verified. Ground contamination by DDT and similar chemicals appears to be low in New Mexico, and he believes a more serious source may be contaminated prey taken by



White-sided jackrabbit (*Lepus callotis gaillardii*) is found in the Animas Valley of southwestern New Mexico. Classed as endangered by the State, the 1976 population of the species was estimated at 220 to 460. It appears to be an entirely nocturnal creature.

falcons wintering in Latin America. (Other minor and/or potential threats include habitat alteration, harassment, and falconry.)

Hubbard feels there is a great deal to be learned about the bird's population trends in the State, its levels of productivity, and threats to its continued existence before the department can initiate the best possible management program to boost the bird's recovery. Accordingly, he believes the State should take into account the practical limits of the program. "For example," Hubbard says, "if the encroachment of chlorinated hydrocarbons into the prey base of New Mexico peregrines should continue to rise, is there any realistic hope of reversing this? If contamination is largely from Latin America, is it realistic to expect that those countries would curtail their use of such chemicals—especially in time to benefit the peregrine?"

Until needed studies are completed and problems are identified, including apparent reproductive failures and population declines, Hubbard favors a pragmatic approach to the management of the peregrine falcon in New Mexico—beginning in late 1978.

In line with this philosophy, Hubbard is opposed to any introduction of exotic subspecies of peregrines into New Mexico to replace *anatum*, should it become extirpated. He fears an exotic subspecies might move into the traditional niche of the North American prairie falcon (*Falco mexicanus*) or some other species, which would affect the existing diversity of endemic biota in the State.

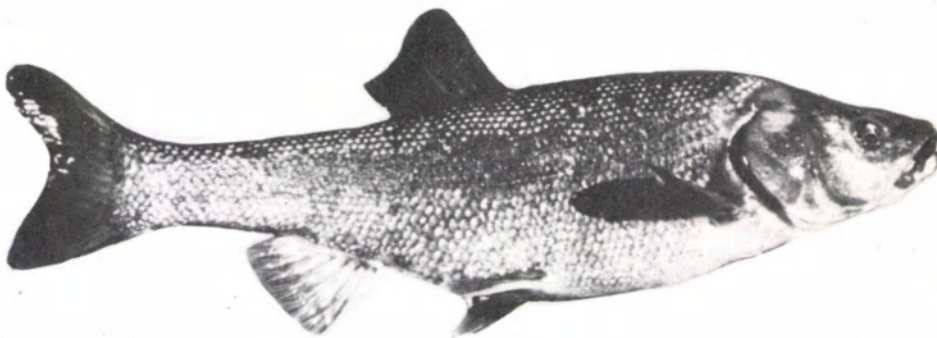
Under its current peregrine production augmentation project, the State plans to work with three eyries. Eggs are to be pulled and replaced with dummies (or, if timing is right, not replaced at all to induce laying of a second clutch), the eggs then shipped to the Cornell University Peregrine Fund Project for incubation, and the young peregrines returned to the eyries to be raised by adult birds. Thus far, eggs have been removed from all three eyries and replaced temporarily by either dummies or young prairie falcons, these to be replaced subsequently by the young peregrines. (The use of young prairie falcons is both to test the acceptance of chicks by the parent peregrines, and to provide substitutes until suitable young peregrines are available.)

Mexican Duck

Hubbard led a study reexamining the status of the Mexican duck that resulted in the delisting of the species by New Mexico. The Service proposed Federal deregulation of the species on March 31, 1978 (see the April 1978 BULLETIN).

Chihuahua Chub

Another species of current concern to the program is the Chihuahua chub (*Gila nigrescens*), also known as the Mimbres chub, a fish species that is listed as endangered by the State. Only about three dozen of these fish, which grow up to a foot long, remain in New Mexico and the United States. The chub's range apparently never was as widespread in the United States as in Mexico, and it is disjunct now because the streams it once inhabited are no



A Chihuahua chub

N.M. Department of Game & Fish photo

State Report

Illinois Gears Up For Federal ES Projects

An Endangered species cooperative agreement is nearing the signing stage between the Illinois Department of Conservation and the U.S. Fish and Wildlife Service.

When completed, the agreement is expected to lead to a series of federally-aided projects involving both State-listed and federally-listed species. Illinois has developed a list of 72 endangered and threatened species in the State, including four on the Federal list that are of primary concern—the gray bat (*Myotis grisescens*), Indiana bat (*M. sodalis*), peregrine falcon (*Falco peregrinus anatum*), and bald eagle (*Haliaeetus leucocephalus*).

The Illinois Endangered Species Board, which operates the program, hopes to become party to a multi-state cooperative study of the Indiana bat after the agreement is signed, along with Missouri and Iowa. Research projects also are planned for the Illinois mud turtle (*Kinosternon flavescens spooneri*), a candidate for Federal protection. Status and habitat surveys are being considered for the Mississippi kite (*Ictinia mississippiensis*) and Swainson's warbler (*Limnethlypis swainsonii*).

Eagle Habitat Purchase

In 1976, as part of the State's bicentennial celebration, public school students contributed \$55,000—\$18,000 of which was used for the purchase of 60 acres of land in Hancock County, and \$37,000 of which was given to the Na-

longer connected.

ES Handbook

The program has recently compiled a "Handbook of Species Endangered in New Mexico," which describes the status of all the 104 species protected by the State. The publication is intended for use by biologists and is available for \$5.00 from the New Mexico Department of Game and Fish, Game Management Division, Villagra Building, Santa Fe, New Mexico 87503.

tional Wildlife Federation toward the acquisition of nearly 300 acres along the Mississippi River in Rock Island County for bald eagle refuges. Although there has been no record of eagles nesting in Illinois for the last 30 years, two eagle nests were found in the northern tip of the State last year. Unfortunately, neither was productive.

Final negotiations are now underway for purchase of the land (at an estimated cost of nearly \$250,000), which lies just south of the two nesting sites. It is hoped that establishment of the reserves will help promote the eagle's return to successful reproduction in Illinois.

State ES Law

The Illinois Legislature passed an Endangered Species Protection Act in 1972. This law was revised in 1977 to bring it into accord with the Federal Endangered Species Act of 1973, also making the State eligible for grant-in-aid funding.

Earlier this year, Carl Becker was named State Endangered Species Program coordinator. The program's budget, funded out of general State tax revenue and administered by the Department of Conservation, is \$32,000 for Fiscal Year 1978 and anticipated at \$40,000 for FY 1979.

Illinois is now compiling a proposed list of endangered and threatened plants which, following public hearings, may receive protection under Illinois' 1977 law.

Rulemaking Actions – May 1978

9 Areas Designated Whooping Crane Critical Habitat

A series of nine refuges and migratory stopover areas used by the two populations of the Endangered whooping crane (*Grus americana*) have been designated as Critical Habitat in a final rulemaking issued by the Service (F.R. 5/15/78).

Critical Habitats for the whooper population of about 70 birds that summers at Canada's Wood Buffalo National Park are as follows:

- Platte River bottoms between Lexington and Dehman, Nebraska
- Cheyenne Bottoms State Waterfowl Management Area, Kansas
- Quivera National Wildlife Refuge (NWR), Kansas
- Salt Plains NWR, Oklahoma
- Arkansas NWR and vicinity, Texas, where the population winters

Critical Habitats for the flock of six whoopers* that has been established at Grays Lake NWR in Idaho include the following:

- Grays Lake NWR
- Monte Vista NWR, Colorado
- Alamosa NWR, Colorado

*There are currently 2 young whooper chicks at Grays Lake in addition to the subadult birds.

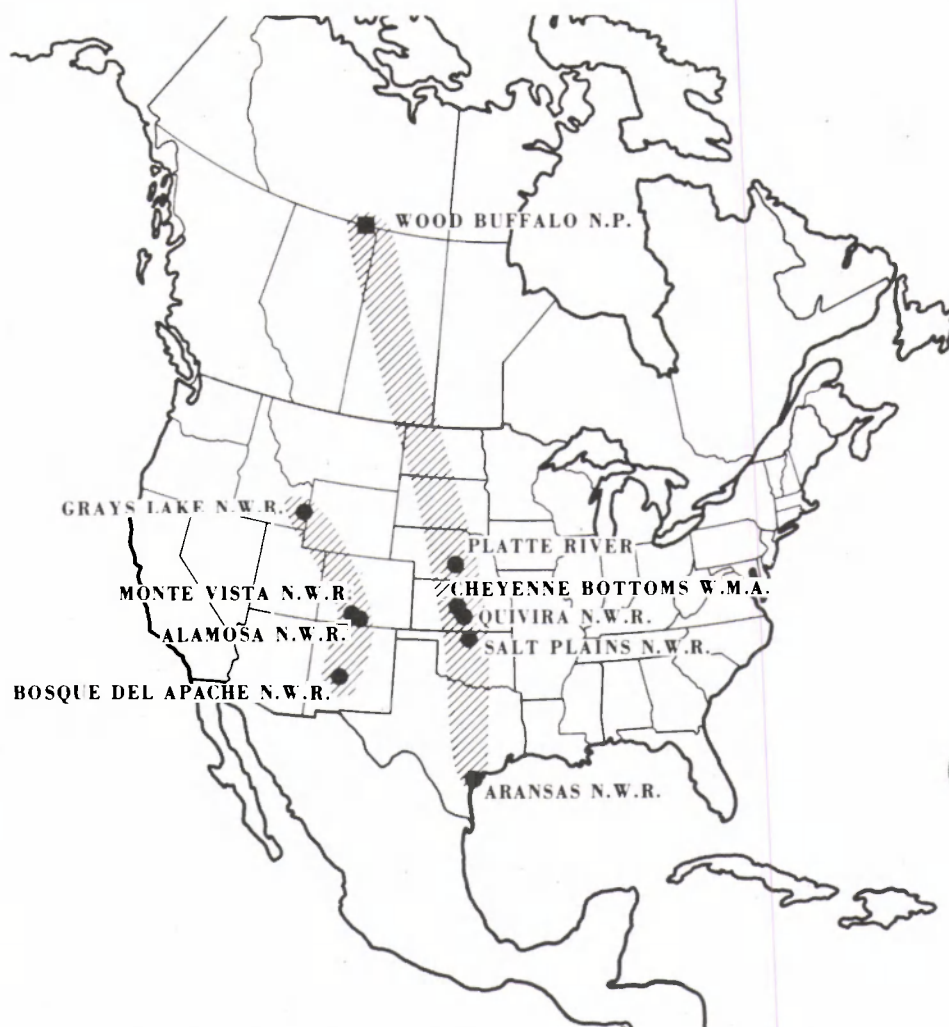
- Bosque del Apache NWR, New Mexico, where the flock winters

The rule, which becomes effective June 14, was first proposed on December 16, 1975, along with Critical Habitat for five other Endangered species. The final rule follows the original proposal except for the Platte River zone in Nebraska, which has been reduced considerably on the basis of data provided by the Nebraska Game and Parks Commission. The Service also has refined the boundaries of the Arkansas NWR zone on the basis of advice from the Whooping Crane Recovery Team.

Comments on the Proposal

The most comments (28 letters) were received about the Platte River zone, including several expressing concern about the intervention of the Federal Government in private and local government affairs. Most of the opposition appeared to be based on an erroneous belief that a Critical Habitat designation would be akin to establishing a wilderness area or refuge that would not be available for human uses.

(However, under section 7 of the Endangered Species Act, only Federal



Whooping crane Critical Habitats are situated along migratory flyways

agencies are required to ensure that any actions they fund, authorize, or carry out do not jeopardize a listed species or destroy or modify its Critical Habitat.)

The decision to narrow the original Platte River zone was based upon a Nebraska Game and Parks Commission suggestion that only the Platte River channel and immediately adjacent wetlands and all rainwater basins of type III and IV wetlands and their associated watersheds be included. In agreeing to this, the Service said the remaining area in the original zone would be excluded until inclusion on the basis of biological data is warranted.

The Kansas Forestry, Fish, and Game Commission opposed a Critical

Habitat designation for the Cheyenne Bottoms zones, contending that sufficient protection already was being afforded the whooper in the State. Requests were received in 1976 to defer a determination on the Colorado and New Mexico zones because sufficient data were lacking on whooping crane requirements in those areas. The Service said the final Critical Habitats have been determined on data acquired more recently (through April 1978).

Delineation of the zones in Idaho, Colorado, and New Mexico will allow for a hoped-for increase in the Grays Lake flock. The Service said additional Critical Habitat sites may be proposed as more precise information becomes available.

FWS Proposes 13 Changes In Convention Appendices

The Service's preliminary findings in a survey of Appendices I and II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora are that a total of 13 changes should be made in the 134 listings of species and subspecies native to the United States (F.R. 5/3/78).

The survey is being undertaken to determine whether or not the United States should propose amendments to the Appendix listings pursuant to the agreement reached by the Convention parties at a special working session in Geneva, Switzerland, in October 1977. The parties agreed to conduct such surveys and submit all amendment proposals by August 15, 1978, so that they could be considered at the next Convention meeting, to be held in San Jose, Costa Rica, on March 19-31, 1979.

Publication of the Service's preliminary findings is intended to elicit public assistance in determining the final form of any U.S. amendment proposal. All information and other comments should be submitted to the Service by July 3. Following analysis of these responses and any other data made available, the Service will proceed to issue a proposed rulemaking simultaneously with transmittal of the U.S. proposal to the Convention Secretariat. Following consideration of all recommended changes by the United States and other parties to the Convention in Costa Rica, amendments to the Appendices will be announced in the *Federal Register* as a final rulemaking.

The full list of all 134 species and subspecies is available in the May 3 issue of the *Federal Register*. The 13 proposed changes—which the Service emphasizes are preliminary findings that may be modified in light of significant new information—are summarized below:

Southern sea otter (*Enhydra Lustris nereis*): Delete from Appendix I because it has recovered in abundance and is protected from trade by Federal and state law, but add to Appendix II because of its similarity of appearance, when processed as pelts, to the northern sea otter.

Northern elephant seal (*Mirounga angustirostris*): Delete from Appendix I because it has made a strong recovery in recent years, it is completely protected under Federal law, and it

does not appear to be a likely candidate for trade.

West Indian monk seal (*Monachus schauinslandi*): Delete from Appendix I because no living specimens have been found in recent years and the species is most likely extinct.

Mexican duck (*Anas platyrhynchos diazi*): Delete from Appendix I. This duck, recently reclassified as a subspecies of mallard, has been proposed by the Service for removal from the U.S. List of Endangered and Threatened Wildlife and Plants (see April 1978 BULLETIN).

Bald eagle (*Haliaeetus leucocephalus*): Retain on Appendix I but also add to Appendix II. Although bald eagle populations in Alaska and Canada cannot be considered to be in danger of extinction, those in the 48 conterminous states are sufficiently reduced in abundance to warrant inclusion in both Appendices.

American kestrel (*Faico sparverius*): Delete from Appendix II primarily because the bird has recovered to the point where it is widespread throughout North and South America.

Greater prairie chicken (*Tympanuchus cupido pinnatus*): Delete from Appendix II because it has recovered sufficiently so that it may now be taken legally by hunters in certain areas.

American alligator (*Alligator mississippiensis*): Delete from Appendix I and add to Appendix II because it has increased its numbers greatly during the past decade.

American crocodile (*Crocodylus acutus*): Delete from Appendix II, add the U.S. population to Appendix I, and add all other populations to Appendix II. There are now only 200-400 known individuals of American crocodile in the United States, and there may be as few as 25 breeding females in this total. Therefore, the U.S. population must be seen as in danger of extinction.

Longjaw cisco (*Coregonus alpenae*): Delete from Appendix I because no living specimens have been seen since 1952; the species is probably extinct.

Blue pike (*Stizostedion vitreum glaucum*): Delete from Appendix I in that the fish is probably extinct.

Yellow-blossom pearly mussel (*Epiblasma [=Dysnomia] florentina curtisi*): Delete from Appendix I because it is probably extinct.

Sampson's pearly mussel (*Epiblasma [=Dysnomia] sampsoni*): Delete from Appendix I because it is probably extinct.

Considerable data on the status of several additional species have been received which, although not addressed in this preliminary notice, may also warrant changes in the Appendices. Any other recommended changes will be included in a proposed rulemaking, to be published in the *Federal Register*. Among the species for which additional information has been received are the lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), river otter (*Lutra canadensis*), brown and grizzly bear (*Ursus arctos*), and Mearns's quail (*Cyrtonyx montezumae mearnsi*).

Status Review

Leopard, Lechwe

The Service has announced that it will review the status of the leopard (*Panthera pardus*) and the lechwe (*Kobus leche*) to determine whether they should be proposed for reclassification under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (F.R. 5/1/78).

The decision to undertake this review was based primarily on evidence presented in a January 1978 petition submitted by Safari Club International. This private organization believes that the leopard should be moved from Appendix I to Appendix II of the Convention. (Under Appendix II, a U.S. permit would no longer be required to import leopards or their parts or products. However, the exporting nation would still be required to certify that the export of the species would not be detrimental to its continued survival in the wild.) Safari Club International has recommended that the lechwe (an antelope native to Africa) be removed from the Appendices.

Comments on this review should be submitted to the Service's Federal Wildlife Permit Office by June 30, 1978.

(continued on next page)



Scientists Bruce Collette and Leslie Knapp seine for specimens of the Endangered Maryland darter in Gasheys Creek, Harford

County. Pollution, siltation, and a possible lowering of water levels pose threats to the fish's continued existence.

Maryland Darter

Portions of two streams in north-eastern Maryland have been proposed as Critical Habitat for the Maryland darter (*Etheostoma sellare*) in a ruling issued by the Service (F.R. 5/12/78).

The proposed areas consist of the lower portion of Deer Creek, a tributary of the lower Susquehanna River, and the main channel of Gasheys Creeks, which flows into Swan Creek just above its mouth on Chesapeake Bay.

Large gravel and cobbles on the beds of the creeks provide cover for the fish, and riffle and pool areas support aquatic insects and snails—the principal food of the darter.

Lying wholly within Harford County, these two areas represent the only presently known habitat for the species, which has been listed as Endangered since 1967.

The darter also has been reported from Swan Creek. Although several localities have been sampled, the precise location of any Swan Creek population is not currently known to the Service.

It is believed that the species had more widespread distribution in the past, but that local populations died out as a result of stream impoundments, pollution, and siltation.

Pollution and siltation are considered the principal threats to the Deer Creek and Gasheys Creek populations. In addition, the former population may be threatened by the possibility of in-

creased withdrawal of water from the stream of municipal use.

The Service has set the following deadlines for the submittal of comments on this proposal: August 10 for the Governor of Maryland and July 11 for the general public.

Key Mud Turtle Plymouth Red-bellied Turtle

Endangered status and Critical Habitat designation have been proposed by the Service for the Key mud turtle (*Kinosternon bauri bauri*) and the Plymouth red-bellied turtle (*Chrysemys rubriventris bangsi*) (F.R. 5/19/78).

Key Mud Turtle

The Key mud turtle occurs only in the lower Florida Keys, where it inhabits several small islands in Monroe County. Small freshwater ponds and adjoining wetlands provide the subspecies with shelter, food (the turtle is carnivorous), and nesting sites.

The presently rapid development of these islands poses a serious threat to the subspecies. The drainage of freshwater wetlands for housing construction, road widening, and mosquito control are reducing the habitat available for the turtle. In addition, there is evidence that, within its diminishing habitat, the Key mud turtle may now be having to compete with introduced species of pond turtles.

An additional threat is posed by automobile traffic on roads within the turtle's range.

All of Middle Torch Key, together with parts of Cudjoe's Key, Little Torch Key, Big Pine Key, and Stock Island, have been proposed as Critical Habitat for the turtle. These areas contain the subspecies' principal populations.

Plymouth Red-bellied Turtle

The known range of—and proposed Critical Habitat for—the Plymouth red-bellied turtle consists of 11 ponds in Plymouth County in southeastern Massachusetts. These ponds and adjacent areas provide cover, food (the subspecies is primarily herbivorous) nesting sites, and wintering areas for the turtle.

The chief threat to the turtle is alteration of this habitat principally by housing construction and road-widening projects. In addition, many people are known to use the turtles for target practice.

Background

On June 6, 1977, the Service announced that it would review the status of 12 turtles to determine whether any of them should be proposed for listing as Endangered or Threatened (see June 1977 BULLETIN). Included in this review were the Key mud turtle and red-bellied turtle (*Chrysemys rubriventris*).

(continued on next page)

Subsequently, the Service received information and comments from the State of Florida and several professional biologists regarding these two species. These responses were taken into account when the current proposal was prepared. All of the respondents recommended Federal protection for the turtles, with some specifically recommending Endangered status.

Additionally, although the red-bellied turtle was included as an entire species in the initial review notice, subsequent information suggested that the subspecies *C. r. rubriventris*, known from New Jersey south to North Carolina, does not qualify for listing under the Endangered Species Act of 1973.

Comments Due

Comments on this proposed rulemaking from the Governors of Florida and Massachusetts should be submitted by August 17; comments from the public are due by July 18.

Hawksbill Sea Turtle

Certain nesting areas on island beaches in the Commonwealth of Puerto Rico have been proposed as Critical Habitat for the hawksbill sea turtle (*Eretmochelys imbricata*) in a rulemaking issued by the Service (F.R. 5/24/78).

The Service believes that survival and recovery of the hawksbill, a tropical species that has been listed as Endangered since 1970, depends largely on the continued existence of suitable and undisturbed nesting areas, such as those proposed in the current rulemaking.

The proposed areas consist of all the beaches on Mona Island (Isia Mona), together with beaches on Culebra Island, Cayo Norte, and Isia Culebrita. Each area is designated as extending inland 0.1 mile from the mean high tide mark.

Hawksbill sea turtles are known to lay their eggs on these beaches and to feed on the rich offshore reefs around the four islands.

All of Mona Island is already listed as Critical Habitat for the yellow-

shouldered blackbird (Endangered), as well as for two Threatened species—the Mona ground iguana and the Mona boa (see March 1978 BULLETIN). In addition, one of the hawksbill's nesting beaches on Culebra Island slightly overlaps the Critical Habitat of the giant anole, an Endangered lizard (see August 1977 BULLETIN). Furthermore, some of the areas proposed for the hawksbill are also known to be occasional nesting sites for the leatherback sea turtle (Endangered) and for the loggerhead and green sea turtles (currently proposed for Threatened status—see April 1977 BULLETIN).

The Service has set the following deadlines for the submittal of comments on the hawksbill proposal: July 23 for the public and August 22 for the Governor of the Commonwealth of Puerto Rico.

West African Manatee

To help provide additional protection for a marine mammal native to Africa, the Service has issued a proposed rulemaking to list the West African manatee (*Trichechus senegalensis*) as a Threatened species (F.R. 5/17/78).

Threats to Survival

Found in the coastal waters and adjacent rivers of West Africa from Senegal to Angola, the manatee is threatened primarily by intensive subsistence hunting, which has reduced or exterminated local manatee populations. As noted in the Red Data Book by the International Union for the Conservation of Nature and Natural Resources (IUCN), which lists the species as vulnerable, "the high value of the meat has been an irresistible incentive for killing."

In addition, although specific information is not available, it is likely that habitat alteration is having a negative impact on the West African manatee. Furthermore, it is possible that locally significant losses occur as a result of shark netting (manatees are susceptible to accidental drowning in fish nets) and collisions with boats.

According to the Marine Mammal Commission: "Damming of rivers and increased boat and ship traffic in many areas may contribute to its [the species'] decline. Assuming that it is not one already, *T. senegalensis* is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

Need for Additional Protection

The species is presently listed in Appendix I of the Convention on International Trade in Endangered Species of

Wild Fauna and Flora, and it is protected under Class A of the African Convention for the Conservation of Nature and Natural Resources (1969). In addition, most of the countries in which the species occurs have passed laws intended to protect the manatee.

Nevertheless, all of these protective measures appear to be ineffective.

Effect of Rulemaking

From the U.S. viewpoint, the species is already protected under the Marine Mammal Protection Act, which, among other things, imposes significant restrictions on importation. Listing the manatee as Threatened under the Endangered Species Act of 1973, as recommended by the Marine Mammal Commission in a November 1977 petition to the Service, would provide an additional prohibition against importation and would also restrict transportation or sale in interstate and foreign commerce.

Furthermore, Threatened status for the West African manatee would allow the United States to

- make the countries of West Africa aware of the importance of manatee protection
- sponsor and disseminate the results of manatee research
- encourage other countries to undertake research, establish reserves, and eventually reintroduce the species in selected areas
- encourage the acquisition of study specimens for scientific research, based on the accidental taking of manatees by African fishermen.

Comments on this proposal should be submitted to the Service no later than July 17.

Georgia ES Symposium

Research papers and status reports on more than 25 species of nongame animals and fish will be presented at a statewide Symposium on Rare and Endangered Wildlife to be held August 3-4 at the University of Georgia, Athens, Georgia.

The symposium will be sponsored by The Wildlife Society's Georgia Chapter and University of Georgia Student Chapter and the Georgia Department of Natural Resources. For more information, contact the Endangered Species Office, Georgia Fish and Game Division, Social Circle, Georgia 30279 (telephone: 404/557-2532).

Reference Note

All Service notices and proposed and final rulemaking are published in the *Federal Register* in full detail. The parenthetical references given in the BULLETIN—for example: (F.R. 6/30/78)—identify the month, day, and year on which the relevant notice or rulemaking was published in the *Federal Register*.

Option 1 would have applied all the standard prohibitions (and permit exceptions) for Threatened species to the African elephant and so essentially would have ended legal commercial import of ivory and other elephant products into the United States. Option 3 would have allowed importation only from nations providing satisfactory certification and evidence that exports to the United States were consistent with effective conservation programs for the elephant. Option 4 would have provided for importation from countries meeting the criteria of Options 2 or 3, and from countries that might not have elephant populations, but which could demonstrate that the product involved originated in a nation meeting the criteria of Options 2 or 3.

Effect of Rulemaking

The Service said that it is likely there will be an initial reduction in the amount of raw and worked ivory entering the United States as a result of the rulemaking because some of the major exporting and reexporting ivory nations are not members of the Convention. At present only one of the three countries with the largest elephant populations—Zaire—is a member of the Convention. However, a second major producer, Tanzania, has indicated it intends to ratify the Convention soon. Zambia is the third major elephant country. Of the 30 other African nations with elephant populations, Nigeria, Republic of South Africa, Niger, Ghana, Senegal, and Botswana are members.

Basis for Rulemaking

The Service based its determination of Threatened status on data gathered by Dr. Iain Douglas-Hamilton, chairman of the Elephant Specialist Group of the International Union for Conservation of Nature and Natural Resources (IUCN), during two years of a three-year study sponsored by the IUCN and the World Wildlife Fund, as well as on its own review of pertinent literature references and information accompanying comments on the proposal.

Douglas-Hamilton's data showed that, while there are at least 1.3 million of these animals still in existence, and there are still some large, apparently well-protected populations, the elephant is declining sharply in 18 of 33 countries where it is known and has recently become extinct in 4 other countries. He estimated that between 100,000 and 400,000 elephants were killed in 1976 for their ivory alone and stated that poaching had become a major threat to the species because of rising ivory prices. In addition, the spe-

cies is under pressure from loss of habitat, and it is hunted as a source of protein.

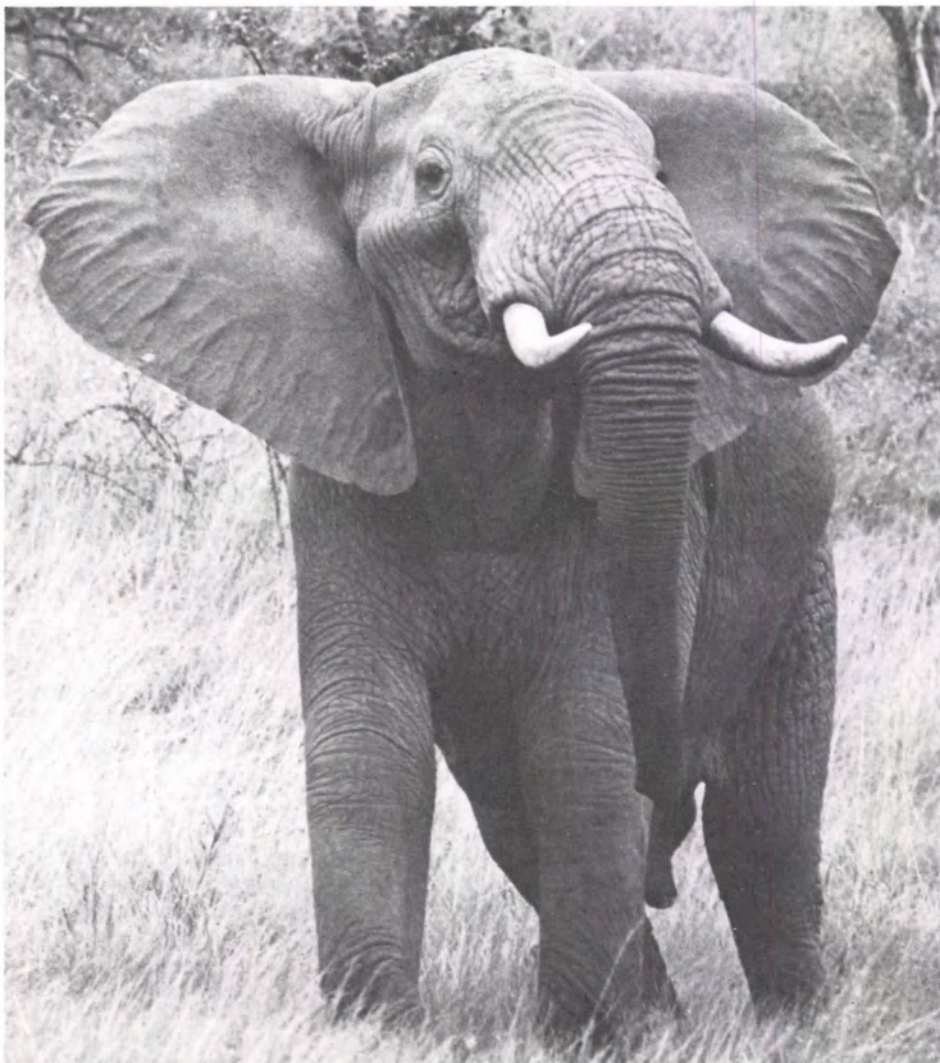
Review of Comments

Most of the approximately 1,000 comments received on the proposal were directed at the choice of options. Many conservationist groups supported the Option 1 ivory import ban. Most of the backers of this option pointed out that any other options might allow opportunities for considerable smuggling and other abuses of the regulations. Rep. Anthony C. Beilenson (D-Calif., who had introduced a bill before Congress to provide special emergency protection to the elephant) commented that law enforcement officials "feel that there is a much higher incidence of falsified or inaccurate documents than they can uncover." He recommended that a procedure be established whereby African nations could petition for hardship exemptions and have ivory quotas set on a case-by-case basis "in line with those nations' conservation programs."

The Service said it had rejected such an approach, which is a modified ver-

sion of Option 3, because it would have put the United States in the "difficult position of evaluating and passing judgment on the conservation and law enforcement policies of foreign nations." Moreover, the Service noted that the likely immediate effect of Option 3 would have been a total ban on elephant product imports while assessment procedures were set up. This course is neither practical nor necessary, the Service feels, because adequate legal policies already exist under the Convention.

Option 1 was rejected by the Service on the grounds that a total ban on ivory traffic is not in itself necessary and might in fact be detrimental to the long-term conservation of the elephant. "If such factors as natural mortality and the need to relieve excess population pressures in certain areas are taken into account," the Service said, "there seems no doubt that a substantial amount of ivory and other products, and a certain number of big game trophies could be taken on a regular basis without being detrimental to the overall status of the species." Acknowl-



A large bull African elephant in the wild

Photo by Leonard Lee Rue III

Elephant

edging that problems could develop in verifying that commercial ivory was taken under proper conservation programs and that there may be some basis for the argument that merely allowing the ivory trade to continue may encourage poaching, the Service noted that no substantive evidence had been presented to show that such problems were insurmountable under the proposed regulatory mechanism or would result in significant declines in elephant populations.

New Publication

The Heritage Trust Program of the West Virginia Department of Natural Resources has published *Volume 1: Vascular Plants* of a two-volume preliminary report on rare and endangered species of West Virginia. The report covers 360 plants and was prepared by Ronald H. Fortney, Roy B. Clarkson, Christina N. Harvey, and John Kartesz. Copies may be obtained for \$1.00 prepaid from the Department of Natural Resources Library, 1800 Washington Street, East, Charleston, West Virginia 25305.

Jetport (continued from page 1)

jetport on the kite and the Endangered Florida panther (*Felis concolor coryi*).

(Following an initial threshold examination, the Service said it was not able to identify any jeopardy to the panther as a result of the project.)

Only an estimated 160 Everglade kites remain in existence, according to a 1977 census, with the greatest concentration in State Water Conservation Area 3A, which lies immediately west of the proposed jetport. The area's largest nesting colony of kites, numbering 30 to 40 birds, is on a willow island 2.6 miles from the end of the proposed runway and slightly north of the proposed landing path.

To protect this colony from disturbance and pollution from overflights, the Service recommended that FAA locate the proposed runway approximately one-half mile south and at least three-quarters of a mile east from the presently planned site. The Service also recommended that the FAA restrict any development to the north, south, and west of the jetport to prevent intrusion into the kite's habitat, and said the FAA should maintain a monitoring program to detect any environmental changes, once the jetport begins operations, that would adversely affect the kite.

Economic Concerns

Approximately 245 commenters on the proposal, including about 155 persons who said their livelihood depended wholly or partly on ivory, supported Option 3. Most of these people also favored measures to ensure that commercial ivory had been legally taken in accordance with what are generally considered sound conservation practices.

Although nearly all African and ivory-reexporting countries were notified about the proposed rulemaking, only eight foreign governments responded. Liberia noted that the elephant had become rare because of poaching and supported Option 1. Botswana, Mozambique, and Rhodesia said the elephant was not endangered or threatened in their territories, that they had adequate conservation programs, and that a total ban on ivory export would be detrimental to their economies.

Various authorities in South Africa supported Option 2, and Tanzania indicated preference for both Options 2 and 3. Option 3 was found most suitable by Zambia. Hong Kong supported Option 4, observing that its ivory carving industry provided employment for 3,000 craftsmen and that 30 percent of its \$24 million in 1977 ivory exports went to the United States.

Option 4 also was favored by the IUCN Elephant Specialist Group, by the Republic of South Africa's Endangered Wildlife Trust, and the American Association of Zoological Parks and Aquariums. Dr. Douglas-Hamilton, writing for the IUCN, said it would be preferable for the United States to remain in the ivory trade and thereby have a means of controlling it.

The Service, however, rejected Option 4 because it would have incorporated investigatory measures required for Option 3 that were determined to be unwarranted.

Other Views

The National Wildlife Federation commented that ivory imports should be restricted to raw ivory tusks from the country of origin. But the Service said this would have denied reexporting nations such as Hong Kong, which are willing to follow Convention regulations, the opportunity to trade with the United States.

The National Rifle Association opposed the proposed listing on grounds that a Threatened classification was unwarranted and the four options were legally defective. The Service responded that the information contained in the rulemaking supported the threatened listing and emphasized that "all requirements of law have been met."

The Service said its opinion was strictly limited to use of the proposed jetport as a training facility and that, should the project be changed to a full-scale air terminal, consultation "must be reinitiated immediately."

The location under consideration, called Site 14, is about 15 miles northwest of Miami. It would replace the present Everglades Jetport, a commercial airline training facility that has been the subject of environmental concern since the late 1960's.

Impact Studies

The Service's opinion was based upon two studies conducted by a team of biologists headed by Noel F. R. Snyder. During a one-week period in April, the team arranged to have commercial airliners fly over the proposed jetport to simulate operations. Observation posts were set up near kite nesting areas. The team reported that less than 30 percent of the kites reacted to the planes by stopping feeding or watching them and that "in the great majority of cases birds gave no detectable signs of any response."

The team then traveled to Colombia and observed four snail kite colonies nesting in the vicinity of the Barranquilla airport. All are situated within

about 2 miles of the airport, including one only 500 yards from the end of the runway. This colony was the "most robust," of the four and consisted of at least 13 kites.

No clear signs were observed that kite activities were significantly affected by the jet overflights, the team said. But the study emphasized that during the team's three days of observations no controls were established to determine how the birds behaved when there were no overflights.

Study Conclusion

The team concluded that, while the short-term studies were unable to document any significant adverse impacts, this should not be "... taken as proof that there are no significant detrimental effects for two major reasons: (1) the magnitude of effects may have been below the resolution of the experiments and observations, and (2) it is possible that we chose the wrong effects to study and that if we had studied other effects of kite biology we might have found significant effects. However, the range of behavior studies were deliberately made as broad as practical ... so the possibilities have at least been narrowed down to a considerable extent."

Pending Rulemakings

The Service expects to issue rulemakings and notices of review on the subjects listed below during the next 90 days. The status or action being considered for each final and proposed rulemaking is given in parentheses.

The decision on each final rulemaking will depend upon completion of the analysis of comments received and/or new data made available, with the understanding that such analysis may result in modification of the content or timing of the original proposal, or the rendering of a negative decision.

Pending Final Rulemakings

- 6 butterflies (C.H.)
- Grizzly bear (C.H.)
- 15 crustaceans (E, T)
- Black toad (T, C.H.)
- New Mexican ridge-nosed rattlesnake (T, C.H.)
- 2 zebras (E)
- 7 Eastern land snails (E, T)
- 12 Western snails (T)
- 2 big-eared bats (E)
- 3 Ash Meadow plants (E)
- 5 plants (E)
- 6 San Francisco Bay Area plants (E, T)
- 2 California plants (C.H.)

Pending Proposed Rulemakings

- 10 North American beetles (E, T)
- 2 harvestmen (E, T)
- 3 mussels (C.H.)
- Rocky Mountain peregrine falcon population (C.H.)
- Colorado squawfish (C.H.)
- Virgin River chub (E, C.H.)
- 2 Hawaiian cave invertebrates (E, T)
- Desert tortoise (Beaver Dam slope population) (E, C.H.)
- Deregulation of Tecopa pupfish
- Unarmored threespined stickleback (C.H.)

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	33	227	260	3	18	21
Birds	68	144	212	3		3
Reptiles	10	46	56	6		6
Amphibians	5	9	14	2		2
Fishes	29	10	39	12		12
Snails		1	1			
Clams	23	2	25			
Crustaceans	1		1			
Insects	6		6	2		2
Plants	15		15	2		2
Total	190	439	629	30	18	48

Number of species currently proposed: 135 animals
1,854 (approx.)

Number of Critical Habitats proposed: 42

Number of Critical Habitats listed: 28

Number of Recovery Teams appointed: 61

Number of Recovery Plans approved: 16

Number of Cooperative Agreements signed with States: 21

May 31, 1978

- Puerto Rican whip-poor-will (C.H.)
- Laysan duck (C.H.)
- Whip-scorpion (E, C.H.)
- Valdina Farms salamander and isopod (E, C.H.)
- Blunt-nosed shiner (E)
- 10 butterflies and moths (E, T, C.H.)
- 2 plants (E) and 6 plants (C.H.)
- San Marcos Spring fish and salamander (E, T, C.H.)
- 20 Appendix I spp.
- Cui-ui (C.H.)
- Whooping crane (C.H.—additional areas)
- Illinois mud turtle (E, C.H.)

- 7 Oregon freshwater fishes (E, T, C.H.)
- Light-footed clapper rail and California least tern (C.H.)
- Yellow-shouldered blackbird (C.H.)
- Santa Cruz long-toed salamander (C.H.)
- 2 Virginia fishes (T, C.H.)
- 3 Texas fishes (E, T, C.H.)
- 1 Texas/New Mexico fish (E)

Pending Notice of Review

- Desert tortoise

Abbreviations: E=Endangered, T=Threatened,
C.H.=Critical Habitat



ENDANGERED SPECIES TECHNICAL BULLETIN

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